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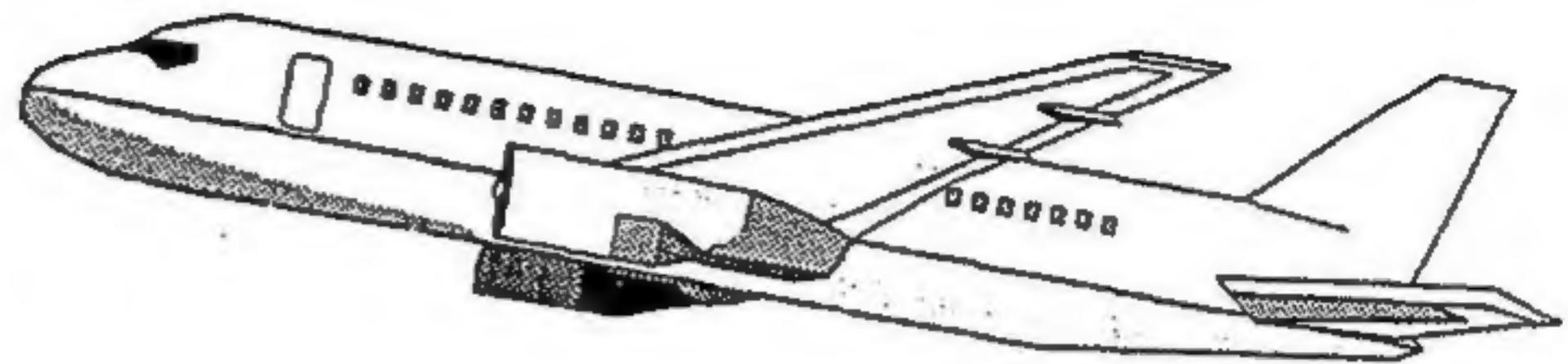
**801321 SERIES**

**THERMAL COMPENSATOR COUPLING ASSEMBLY**

**REVISION NO. 4 DATED SEPTEMBER 1, 1998**

**HIGHLIGHTS**

Page No.	Description of Change	Effectivity
General	Extensively revised format and content throughout CMM to comply with ATA100 Rev. 34 guidelines and to comply with current Scott formatting and procedures. Added new end-items P/N 801321-11 thru -16, -18 & -19 (containing Druck transducer P/N 10008792). Revision bars have not been used due to the extensive changes.	All Models
RR 1/2	Added revision dates.	All Models
SBL 1/2	Added information from SIL-35-06 and SIL-35-11.	All Models
LEP 1/2	Updated page numbers and dates.	All Models
INTRO-1 thru -3/4	Extensively revised.	All Models
1-4	Extensively revised. Added information from SIL-35-11.	All Models
101-106	Extensively revised. Added Special Tools and Test Equipment. Revised allowable output voltages for transducer P/N 10003108 (Sparton).	All Models
301-302	Extensively revised.	All Models
401-402	Extensively revised. Revised cleaning materials per environmental guidelines.	All Models
501/502	Extensively revised.	All Models
601-602	Extensively revised.	All Models
701-704	Extensively revised. Added information from SIL-35-06.	All Models
801/802	Extensively revised. Torque values are the same.	All Models
901/902	Extensively revised. Table 901 added to show list of all Special Tools, Fixtures and Test Equipment called out in CMM.	All Models
1001-1006	Extensively updated. Figure 1 revised for ease of use. Added new end-item assemblies P/N 801321-11 thru -16, -18 & -19. Added Druck Transducer P/N 10008792. Revised the item numbers for all end-items to -1 or alpha variation of -1, per current Boeing preferences. Added two new subassemblies (10A and 20A) to replace items -10, -20, -30, -40, -50 and -60.	All Models



## **COMPONENT MAINTENANCE MANUAL WITH ILLUSTRATED PARTS LIST**

**FOR:**

**801321 SERIES  
THERMAL COMPENSATOR  
COUPLING ASSEMBLY**



## RECORD OF REVISIONS

Keep this record in the front of this manual after the title page. When a revision to this Component Maintenance Manual (CMM) is received, put the revision pages into this CMM and write in the revision number, revision date, date filed and your initials into the table below.



## RECORD OF TEMPORARY REVISIONS

Keep this record in the front of this manual. When a temporary revision to this Component Maintenance Manual (CMM) is received, put the revision pages into this CMM and write in the revision number, revision date, date filed and your initials into the table below.



**CMM WITH IPL  
801321 SERIES  
THERMAL COMPENSATOR COUPLING ASSEMBLY**

## SERVICE BULLETIN LIST

Keep this record in the front of this Component Maintenance Manual (CMM). When you receive service bulletins or service information letters for this CMM, put the service bulletin or service information letter pages into this CMM and write the date issued and the date incorporated in the table below.

35-01-59

SBL-1/2  
Sep 1/98

### LIST OF EFFECTIVE PAGES

<u>Subject</u>	<u>Page</u>	<u>Date</u>	<u>Subject</u>	<u>Page</u>	<u>Date</u>
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Record of Revisions	RR-1/2	Sep 1/98		602	Sep 1/98
Record of Temporary Revisions	RTR-1/2	Sep 1/98	Assembly	701	Sep 1/98
Service Bulletin List	SBL-1/2	Sep 1/98		702	Sep 1/98
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## INTRODUCTION

### 1. Scope

This manual gives the user maintenance, overhaul and service procedures for the 801321 Series Thermal Compensator Coupling Assembly (Coupling Assembly) listed below:

801321-00	801321-06	801321-12
801321-01	801321-07	801321-13
801321-02	801321-08	801321-14
801321-03	801321-09	801321-15
801321-04	801321-10	801321-16
801321-05	801321-11	801321-18
		801321-19

This Component Maintenance Manual (CMM) provides the following information.

- A. Correct safety regulations that must be followed during the procedures given in this CMM.
- B. The correct sequence of operations that must be performed on the Coupling Assembly.
- C. Specifications and a list of the tools, equipment and materials for maintenance, check, test and repair of the equipment.

Refer to Component Maintenance Manual (CMM) 35-11-2 from Sparton Technology, Inc., Rio Rancho, NM (V20768) for information on the 10003108 (70) transducer. The information in CMM 35-11-2 is not included in this manual. CMM 35-11-2 is not available from Scott Aviation.

### 2. Warnings, Cautions and Notes

The Warnings, Cautions and Notes call attention to important information.

#### A. Warnings

Warnings call attention to the use of materials, processes, methods, procedures or limits which must be followed exactly to avoid personal injury or death.

#### B. Cautions

Cautions call attention to methods and procedures which must be followed to avoid damage to the Coupling Assembly or equipment.

#### C. Notes

Notes call attention to methods that make the job easier.

### 3. General Warnings

The following warnings apply throughout this CMM.

**WARNING:** ANY SERVICE OR OVERHAUL PERFORMED ON THIS APPARATUS SHALL BE DONE ONLY BY THOSE FACILITIES EXPERIENCED IN, OR BY PERSONNEL KNOWLEDGEABLE IN, HIGH PRESSURE AVIATION OXYGEN EQUIPMENT. IF NONE IS KNOWN, CONTACT SCOTT AVIATION OR ITS DISTRIBUTORS FOR NAMES OF AUTHORIZED SERVICE CENTERS. IMPROPER USE OR IMPROPER MAINTENANCE OF THIS EQUIPMENT MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

**WARNING:** ALL PROCEDURES DESCRIBED IN THIS MANUAL SHALL BE PERFORMED IN AN AREA FREE OF DUST, LINT, FINE METAL FILINGS, OIL, GREASE, FLAMMABLE SOLVENTS OR OTHER COMBUSTIBLE MATERIALS. COMBUSTIBLE MATERIALS CAN IGNITE RESULTING IN EXPLOSION, FIRE, PERSONAL INJURY OR DEATH.

**WARNING:** REFER TO AND FOLLOW APPLICABLE MANUFACTURERS' AND SUPPLIERS' MATERIAL SAFETY DATA SHEETS (MSDS) BEFORE USING PRODUCTS SPECIFIED IN THIS MANUAL OR SERIOUS PERSONAL INJURY MAY OCCUR.

**WARNING:** SUITABLE EYE PROTECTION SHALL BE WORN TO PREVENT ACCIDENTAL EYE INJURIES.

### 4. Product Support Services

Product support services for the Coupling Assembly shown in this CMM are provided by Scott Aviation. These services include repair and overhaul, replacement parts, and technical documentation.

Scott Aviation (Vendor Code 53655)  
A Scott Technologies Company  
225 Erie Street  
Lancaster, New York 14086-9502  
U.S.A

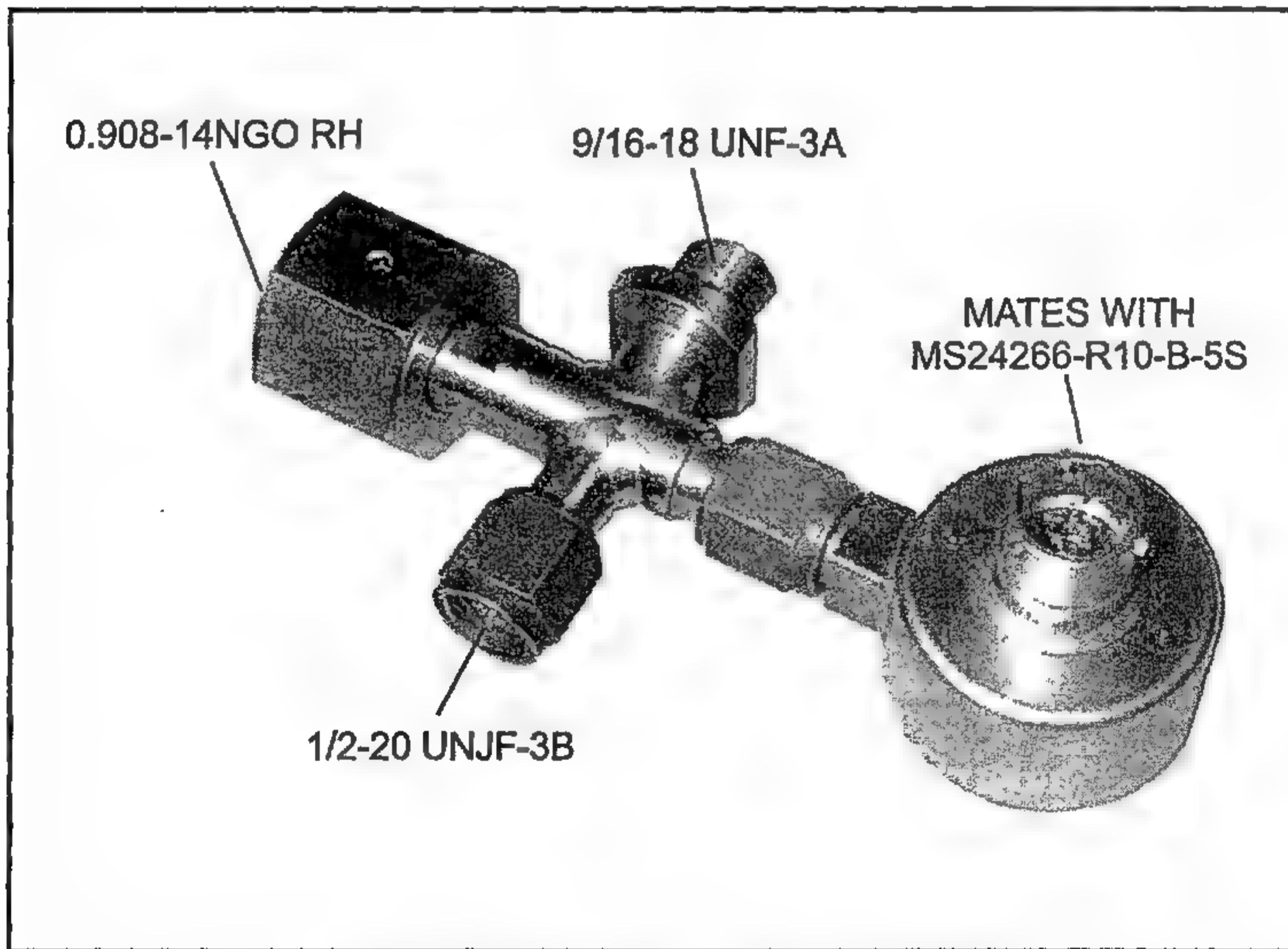
Telephone: 716-683-5100  
FAX: 716-681-1089

**5. Abbreviations**

AR	As Required
ASSY	Assembly
cm	centimeter
CMM	Component Maintenance Manual
DC	Direct Current
EFF	Effectivity
e.g.	example given
Fig	Figure
ID	Identification
in	inch
in•lbs	inch pounds
IPL	Illustrated Parts List
mg	milligram
MPa	MegaPascal
NHA	Next Higher Assembly
N•m	Newton meter
No.	Number
NP	Part that cannot be purchased by itself
OPT	Optional part that can be interchanged with the primary part
P/N	Part Number
psi	pounds per square inch
psia	psi absolute
psig	psi gauge
REPLD	replaced
REPLS	replaces
RF	Reference
SPN	Scott Part Number
VDC	Volts, Direct Current
VM	Digital Multimeter in the Voltmeter mode, or Voltmeter

DESCRIPTION AND OPERATION1. General

This section describes the components and the operation of the 801321 Series Thermal Compensator Coupling Assembly, hereafter referred to as the Coupling Assembly. There are different styles of the 801321 Series Coupling Assemblies, but they are approximately the same in design and operation. The differences between the part numbers in the Coupling Assemblies are the style and location of the transducers and the style of coupling used. A dash number after the 801321 identifies which coupling and transducer is used and where the transducer is attached to the Coupling Assembly. Refer to Figure 1 for a typical illustration of the Coupling Assembly. Thread sizes are in inches. Refer to IPL Figure 1 for the orientation of the parts on a specific Coupling Assembly part number.



Thermal Compensator Coupling Assembly  
Figure 1

## 2. Description

The Coupling Assembly is used in the high-pressure oxygen system of the aircraft for both crew and passenger systems. It connects the cylinder high-pressure lines to the charging line, the pressure transducer and the pressure reducer using connections that are as short as possible. The Coupling Assembly also includes a thermal compensator. The thermal compensator and the pressure transducer operate as follows.

### A. Thermal Compensator

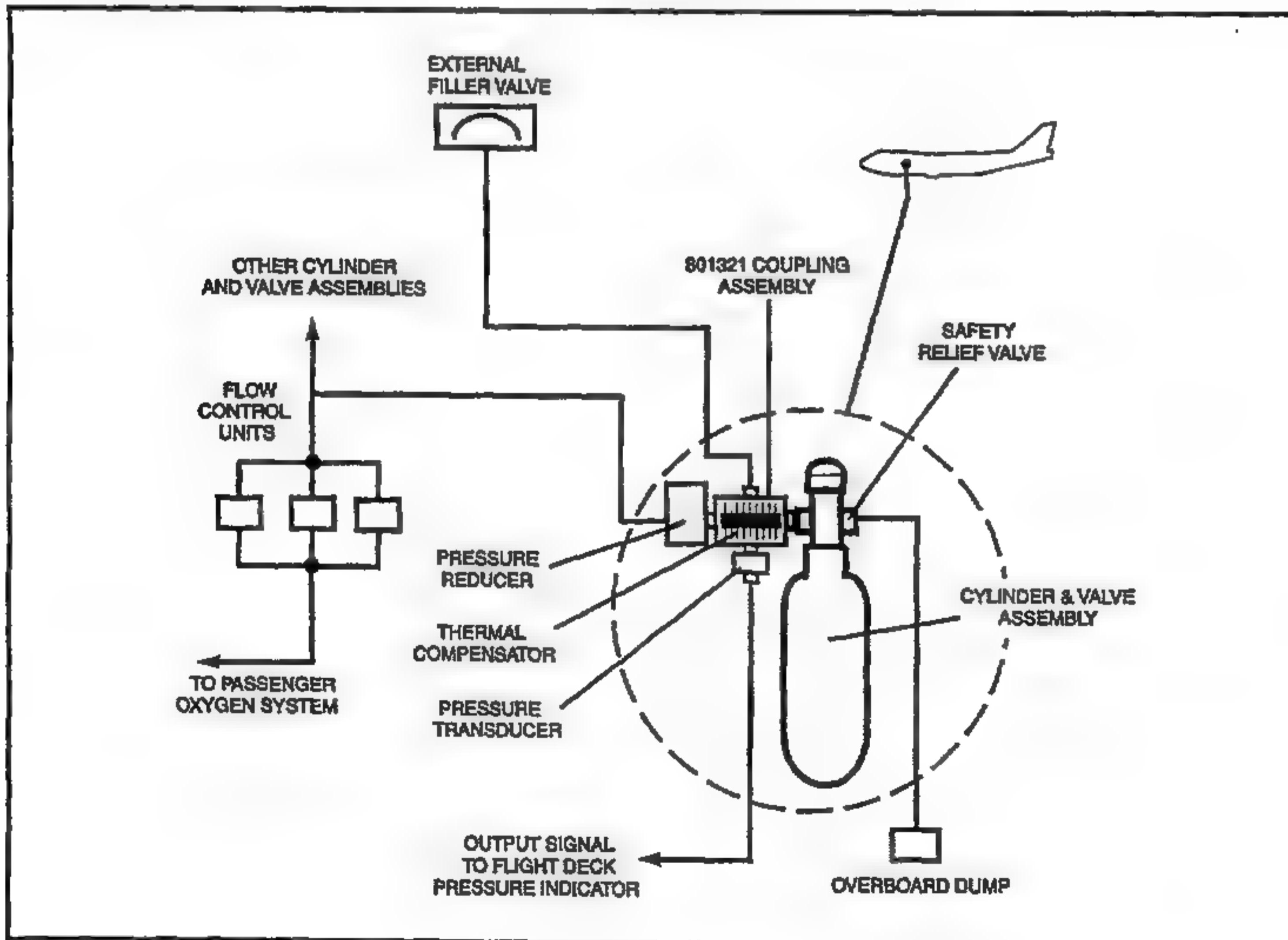
The thermal compensator within the Coupling Assembly acts as a heat sink to minimize temperature rise, which may be produced by rapid adiabatic compression.

### B. Pressure Transducer

The pressure transducer is a device that converts pressure to a direct current (DC) voltage. The pressure transducer is powered by +28 volts DC from the power supply of the aircraft. The output voltage of the pressure transducer is 0 to +5 VDC which is proportional to the oxygen pressure (0 to 2250 psig).

## 3. Typical Installation

The Coupling Assembly attaches to the high-pressure oxygen cylinder and valve assembly and the external filler valve of the aircraft. Figure 2 shows the Coupling Assembly and high-pressure oxygen system on the aircraft.



High-Pressure Oxygen System  
Figure 2

#### 4. Operation

The Coupling Assembly is a manifold that connects the components of the high-pressure oxygen system. The Coupling Assembly performs the following functions.

- A. The Coupling Assembly connects the charging line to the cylinder and valve assembly. During a recharge of the cylinder, the high-pressure oxygen moves through the thermal compensator to the cylinder.
- B. The Coupling Assemblies that have a transducer attached sense cylinder pressure and provide a DC output voltage.
- C. The Coupling Assembly connects the high-pressure oxygen from the cylinder and valve assembly to a pressure reducer (e.g., regulator) for conversion to low-pressure oxygen for use in the aircraft.

#### 5. Potential Leakage

- A. The on-aircraft connection of certain models and serial numbers of this Coupling Assembly to certain models and serial numbers of the 801307 Series Cylinder and Valve Assembly have a potential to leak. The affected Scott end items are identified in Tables 1-3. Table 4 shows which combinations have a potential for leakage.

This potential for leakage is caused by the coupling union nut (P/N 6121-01) bottoming against the thread shoulder on the valve body. Affected Coupling Assemblies have a nipple that rests deeper in the coupling union. Affected Cylinder & Valve Assemblies have a valve body with less undercut at the bottom of the connection threads. Refer to SIL-35-11 for Figures that help visually identify the parts. Certain combinations of well worn parts have the potential for leakage. These well worn parts are still serviceable, but may allow an excess tolerance build-up when connected. If leakage occurs, as described above, replace the Coupling Assembly with another with the same part number.

Table 1  
Affected Coupling Assembly Part numbers and Aircraft Models

Part Numbers of Coupling Assemblies	Aircraft Models Used On
801321-00, -01, -03, -07, -08	747-100, -200, -300, -SP, -SR
801321-02, -04, -05, -06	747-100, -200, -300, -400, -SP, -SR

Table 2  
Serial numbers and Manufacture Dates of Affected Coupling Assemblies

Part Numbers of Coupling Assemblies	Serial numbers of Valve Assemblies	Manufacture Dates of Valve Assemblies
801321-00, -01, -02, -03, -04	1 thru 2594	Before May 1978
801321-05, -06, -07, -08	1 thru 2873	Before May 1978

Table 3  
Affected Cylinder & Valve Assemblies

Part Numbers of Cylinder & Valve Assemblies	Serial Numbers of Valve Assemblies	Manufacture Dates of Valve Assemblies
801307-00 thru 801307-09	49128 thru 59999	Sep 1993 thru Aug 1998

Table 4  
Results of Combinations

Dates of Manufacture		Result When Connected
Coupling Assemblies	Valve Assemblies	
Before May 1978	Before Sep 1993	No Leakage
Before May 1978	Sep 93 thru Aug 1998	POTENTIAL LEAKAGE
Before May 1978	After Aug 1998	No Leakage
After May 1978	All Dates	No Leakage

**CAUTION:** OVER-TORQUING THE COUPLING UNION NUT ON THE CYLINDER & VALVE ASSEMBLY CAN DAMAGE THE VALVE ASSEMBLY OR THE COUPLING ASSEMBLY.

Refer to the applicable Aircraft Maintenance Manual for the correct torque when connecting the Coupling Assembly to the Cylinder & Valve Assembly. Do not apply additional torque to the coupling union nut to attempt to seal the leak. Additional torque will not seal a leak.

## TESTING AND FAULT ISOLATION

### 1. General

This section contains the testing and fault isolation procedures for the 801321 Series Thermal Compensator Coupling Assembly (Coupling Assembly). If any repair or service is performed on the Coupling Assembly or any of its components, the Coupling Assembly must pass the tests in this section after all repairs or service are completed. Should a failure occur during the testing procedures, refer to Table 104, Troubleshooting Chart, for help. Refer to the ILLUSTRATED PARTS LIST section of this manual for the item numbers given in parentheses.

### 2. Special Tools and/or Test Equipment

Special tools or test equipment required for this section of the manual are listed in Table 101. Equivalent test equipment may be used for the listed items. Quantity required is one for each listed item unless noted otherwise.

Table 101  
Special Tools and Test Equipment

QTY	PART NAME	NUMBER	MANUFACTURER
1	Digital Multimeter (VM) (0-10 VDC)	10 Series	Fluke Corp 6920 Seaway Blvd. P. O. Box 9090 Everett WA 98206-9090 (V89536)
1	Power Supply (28 ±2 VDC)	LNS-Z-28	Lambda Electronics 515 Broad Hollow Rd. Melville, NY 11747-3700 (V9T790)
1	Pressure Gauge (0-2000 psi)	1403 Series Oxygen Cleaned	Ametek (U.S. Gauge) 900 Clymer Ave. Sellersville, PA 18960-2625 (V61349)
1	Regulator, Test	PR55-1A51H9L151	Vernco Corp. (Go, Inc.) 305 S. Acacia St. San Dimas, CA 91773-2925 (V62527)
1 or 2 AR	Test Plug (As Required) (Mates with internal thread of coupling assembly)	MS21913J5 (SPN 33502-305)	Commercially available
1 AR	Test Cap (2 pieces) (As Required) (Mates with external thread of coupling assembly)	MS21914-6J Seal cap w/ MS21921-6J Nut (Requires both parts)	Commercially available

### 3. Test Materials

Consumable test materials required for this section of the manual are listed in Table 102. Equivalent materials may be used for the listed items.

**Table 102**  
**Consumable Test Materials**

MATERIAL	DESCRIPTION	MANUFACTURER
Leak Test Solution	Sherlock Leak Detector, Type 1 MIL-L-25567D	Winton Products Co., Inc. 2500 West Blvd. P.O. Box 26332 Charlotte NC 28236 (V23316)
Test Gas	Oxygen (MIL-PRF-27210, Type 1) -or- Air - Equivalent in purity and dryness to Oxygen and Nitrogen -or- Nitrogen (BB-N-411)	Local Vendor
Note 1: Oxygen (MIL-PRF-27210, Type I) is the test gas specified in the test procedures in this section of the manual. If water pumped nitrogen or water pumped air (specified in Note 2) is used for the test gas, the applicable test parameters must have the appropriate density correction factors calculated and used, and the test equipment must be calibrated for the test gas. (Copies of specification MIL-PRF-27210 are available from: Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094 USA)		
Note 2: Water pumped nitrogen per Federal Specification BB-N-411, Type I, Class I, Grade B. (Copies of Federal Specification BB-N-411 are available from: General Services Administration, Business Service Center, Washington, DC USA)		
Water pumped air, equivalent in purity to: MIL-PRF-27210, Type I		

### 4. Required Documents

Component Maintenance Manual 35-11-2 for the 10003108 Transducer Assembly (70, IPL Fig. 1) is available from Sparton Technology, Inc., 4901 Rockaway Blvd., SE, Rio Rancho, NM 87124-4469 (V20768). This CMM is not available from Scott Aviation.

### 5. Testing Procedures

The functional tests that follow must be performed on the Coupling Assembly (-1 thru -1T) in the order that they are listed. Unless otherwise noted, all tests apply equally to all Coupling Assemblies.

## 5. Testing Procedures Continued

**WARNING:** ANY SERVICE OR OVERHAUL PERFORMED ON THIS EQUIPMENT SHALL BE DONE ONLY BY THOSE FACILITIES EXPERIENCED IN, OR BY PERSONNEL KNOWLEDGEABLE IN, AVIATION OXYGEN EQUIPMENT. IF NONE IS KNOWN, CONTACT SCOTT AVIATION OR ITS DISTRIBUTORS FOR NAMES OF AUTHORIZED SERVICE CENTERS. IMPROPER USE OR IMPROPER MAINTENANCE OF THIS EQUIPMENT MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

**WARNING:** ALL PROCEDURES DESCRIBED IN THIS MANUAL SHALL BE PERFORMED IN AN AREA FREE OF DUST, LINT, FINE METAL FILINGS, OIL, GREASE, FLAMMABLE SOLVENTS OR OTHER COMBUSTIBLE MATERIALS. THESE MATERIALS MAY IGNITE IN THE PRESENCE OF OXYGEN AND CAUSE AN EXPLOSION OR FIRE RESULTING IN SERIOUS PERSONAL INJURY OR DEATH.

**WARNING:** IN ALL PROCEDURES LISTED BELOW, OXYGEN IS USED AS THE TEST GAS. WATER PUMPED NITROGEN OR WATER PUMPED AIR MAY BE SUBSTITUTED, BUT TEST RESULTS MUST BE CONVERTED PRIOR TO BEING COMPARED WITH TEST RESULTS SPECIFIED FOR OXYGEN. DO NOT, UNDER ANY CIRCUMSTANCES, USE OIL-PUMPED GAS AS THIS WILL CAUSE CONTAMINATION OF THE COUPLING ASSEMBLY AND TEST EQUIPMENT. OIL, EVEN IN MINUTE QUANTITY, COMING IN CONTACT WITH OXYGEN MAY CAUSE AN EXPLOSION OR FIRE.

**WARNING:** SUITABLE EYE PROTECTION SHALL BE WORN TO PREVENT ACCIDENTAL EYE INJURIES.

**WARNING:** DO NOT ALLOW DIRT, DUST, PETROLEUM PRODUCTS, OR OTHER CONTAMINANTS IN THE UNIT OR ON TOOLS OR TEST EQUIPMENT THAT CONTACT THE UNIT BECAUSE THESE MATERIALS MAY CAUSE FIRE, EXPLOSION, AND/OR PERSONAL INJURY WHEN EXPOSED TO OXYGEN.

**CAUTION:** SHOCK TO, OR DROPPING OF, THE TRANSDUCER (70, 70A, IPL FIG. 1) MAY CHANGE THE ELECTRICAL CHARACTERISTICS OF THE TRANSDUCER. IF SHOCK TO, OR DROPPING OF, THE UNIT OCCURS, RETEST THE TRANSDUCER.

Perform the following tests.

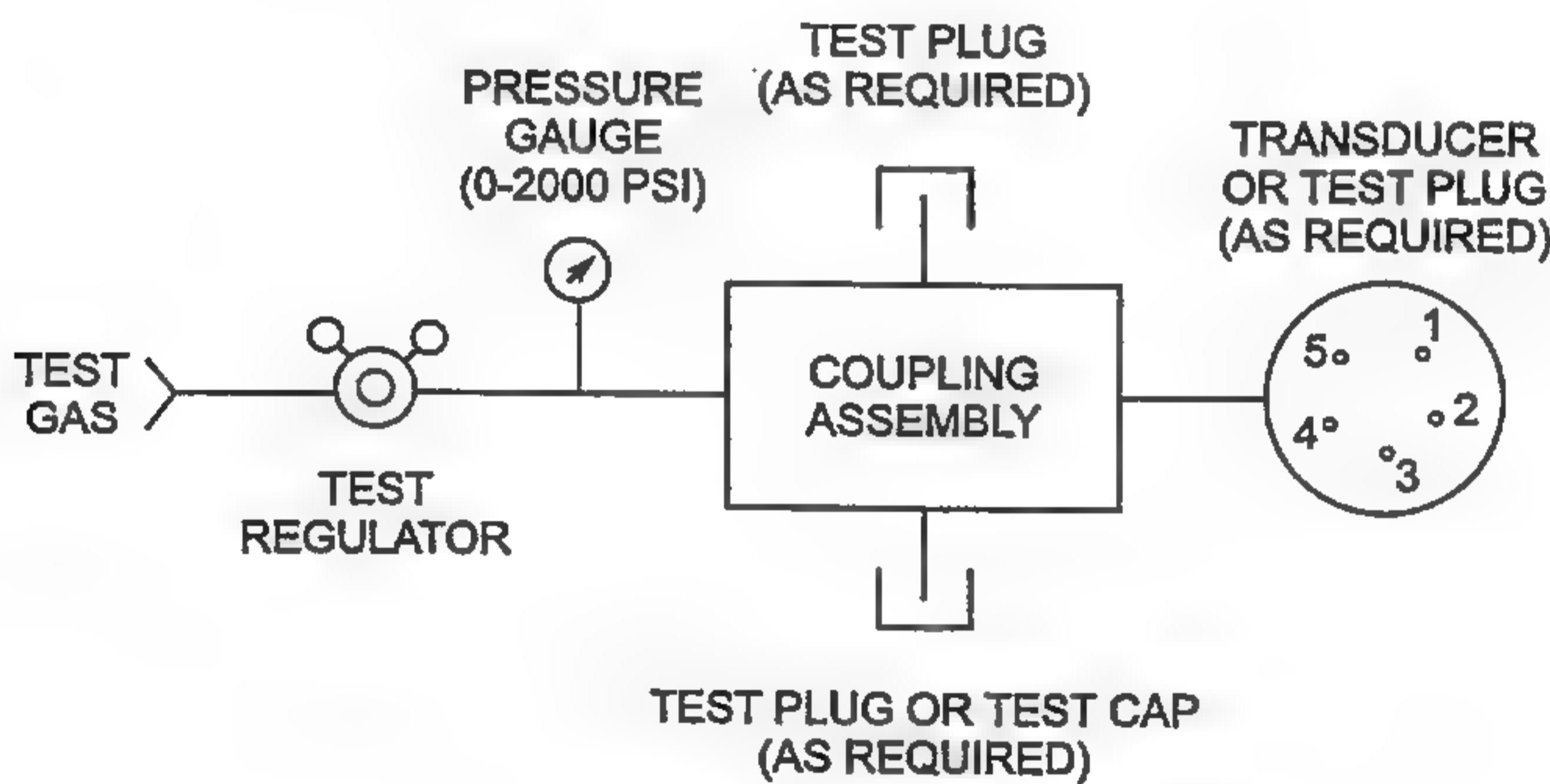
### A. Leakage Test

- (1) Connect and tighten test equipment (refer to Figure 101) and, if applicable, connect and tighten test plug(s) and test cap (refer to Table 101) to Coupling Assembly at any open connections.

## 5. Testing Procedures (Continued)

### A. Leakage Test (Continued)

- (2) Adjust the test regulator and apply 1850 +50 -0 psig (12.8, +0.34 -0 MPa) of test gas to the input of Coupling Assembly.
- (3) Use leak test solution (refer to Table 102) and check all the connections to/ from Coupling Assembly for leaks. If necessary, decrease the pressure from the test regulator to 0 psig and tighten the connections (refer to FITS AND CLEARANCES, Table 801 in this manual for torque values).
- (4) Apply 1850 +50 -0 psig (12.8, +0.34 -0 MPa) of test gas for one minute to the input of Coupling Assembly and then use leak test solution and check the connections of Coupling Assembly for leaks. The Coupling Assembly must not leak at any of the connections after one minute.
- (5) Decrease the pressure of the test gas from the test regulator to 0 psig and remove the Coupling Assembly from the test equipment.
- (6) Remove the moisture from the exterior of Coupling Assembly using a flow of clean, dry, oil-free air.



Leakage Test Set-up  
Figure 101

### B. Electrical Continuity Test

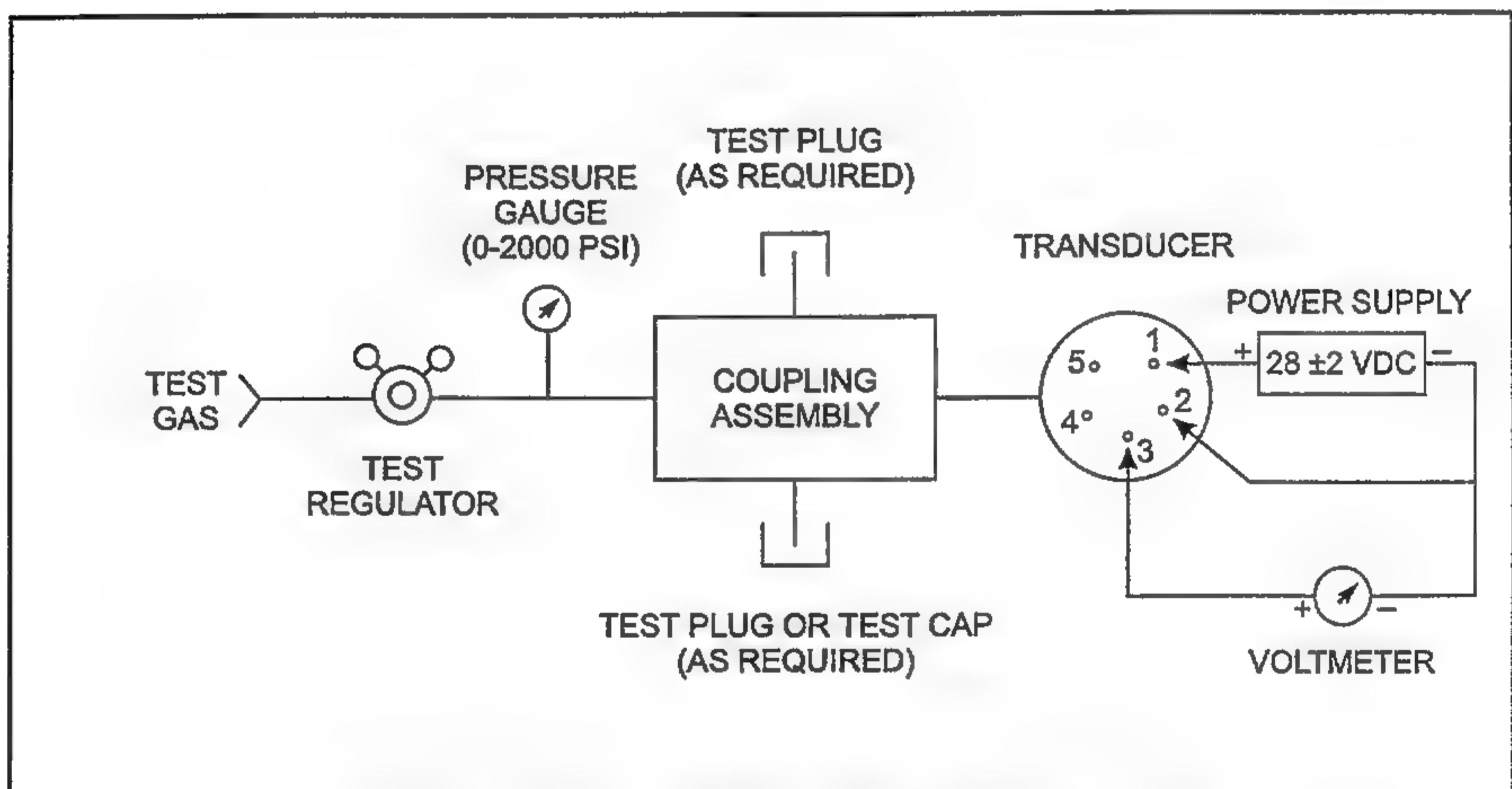
This test is used on all units except for the 801321-00 (-1, IPL Fig. 1), 801321-07 (-1G, IPL Fig. 1) and 801321-10 (-1K, IPL Fig. 1) Coupling Assemblies.

**CAUTION:** FAILURE TO CONNECT THE POWER SUPPLY TO THE CORRECT TERMINALS OF THE TRANSDUCER MAY RESULT IN PERMANENT DAMAGE TO THE TRANSDUCER.

## 5. Testing Procedures (Continued)

### B. Electrical Continuity Test (Continued)

- (1) Attach and tighten test equipment (refer to Figure 102), test plug(s) and test cap (refer to Table 101) to Coupling Assembly at any open connections.
- (2) Slowly increase the test regulator pressure to 2000 psig (13.8 MPa) and observe that the output voltage of the transducer increases smoothly and there is no evidence of discontinuity by erratic voltage readings or voltage readings that drop to zero volts. The output voltage must smoothly increase as the test regulator input pressure smoothly increases.
- (3) Slowly decrease the test regulator pressure to 0 psig and observe that the output voltage of the transducer decreases smoothly and there is no evidence of discontinuity of the transducer by erratic voltage readings or voltage readings that drop to zero volts. The output voltage must smoothly decrease as the test regulator input pressure smoothly decreases.
- (4) Decrease the pressure of the test gas from the test regulator to 0 psig and remove the Coupling Assembly from the test equipment.



Electrical Continuity Test and Output Voltage Test Set-up  
Figure 102

## 5. Testing Procedures (Continued)

### C. Output Voltage Test

This test is used on all units except for the 801321-00 (-1, IPL Fig. 1), 801321-07 (-1G, IPL Fig. 1) and 801321-10 (-1K, IPL Fig. 1) Coupling Assemblies.

- (1) Attach and tighten test equipment (refer to Figure 102), test plug(s) and test cap (refer to Table 101) to Coupling Assembly at any open connections.
- (2) Adjust the test regulator to the pressures shown in Input Pressure, Table 103 at the input of the Coupling Assembly. Observe the output voltage readings, they must be within the range of voltages shown in Output Voltage.
- (3) Decrease the pressure of the test gas from the test regulator to 0 psig and remove Coupling Assembly from the test equipment.

**Table 103**  
Transducer Output Voltages

INPUT PRESSURE (psig/MPa)	ALLOWABLE OUTPUT VOLTAGE (DC Volts)	
	TRANSDUCER P/N 10003108 (70, IPL Fig. 1)	TRANSDUCER P/N 10008792 (70A, IPL Fig. 1)
500 / 3.45	0.896 - 1.344	1.036 - 1.204
1000 / 6.90	2.016 - 2.464	2.156 - 2.324
1500 / 10.34	3.136 - 3.584	3.276 - 3.444
2000 / 13.79	4.256 - 4.704	4.396 - 4.564

## 6. Fault Isolation

Refer to Table 104 for troubleshooting problems, causes and solutions. Refer to IPL Figure 1 for item numbers.

**Table 104**  
**Troubleshooting Chart**

TROUBLES	PROBABLE CAUSES	SOLUTIONS
5.A. Leakage Test		
Leakage at connection of transducer (70, 70A), plug (80, 90), or plug and chain (100) to Coupling Assembly (-1 thru -1T).	Transducer, plug, or plug & chain loose at connection.	Retorque nut (-30, -40) for transducer, plug, or plug and chain per Table 801.
	Sealing surfaces defective or scratched.	Replace defective component.
5.B. Electrical Continuity Test		
Erratic output voltage readings on transducer (70, 70A).	Transducer wiper arm intermittent (70).	Troubleshoot transducer. Refer to Spartan CMM 35-11-2.
	Defective electronics within the transducer (70A).	Replace transducer.
5.C. Output Voltage Test		
Output voltage of the transducer (70, 70A) not within the specified limits at the given input pressure (per Table 103).	Faulty Bourdon Tube Linkage within the transducer (70).	Troubleshoot transducer. Refer to Spartan CMM 35-11-2.
	Defective electronics within the transducer (70A).	Replace transducer.
No output voltage of the transducer (70, 70A).	Defective parts within the transducer (70).	Troubleshoot transducer. Refer to Spartan CMM 35-11-2.
	Defective electronics within the transducer (70A).	Replace transducer.
	No input power (28 ±2 VDC).	Apply input power to the transducer.

## DISASSEMBLY

### 1. General

This section describes the equipment and procedures necessary for disassembly of the 801321 Series Thermal Compensator Coupling Assembly (Coupling Assembly). Disassemble the Coupling Assembly only to the level necessary, as determined in TESTING AND FAULT ISOLATION, to replace the components that may be defective. Refer to the ILLUSTRATED PARTS LIST section of this manual for the item numbers.

### 2. Special Tools and Equipment

There are no special tools or equipment necessary for disassembly of the Coupling Assembly.

### 3. Required Documents

For disassembly of Sparton transducers, P/N 10003108 (70, IPL Fig.1), refer to COMPONENT MAINTENANCE MANUAL (CMM) 35-11-2 from Sparton Technology, Inc., Rio Rancho, NM (V20768). This CMM is not available from Scott Aviation.

### 4. General Disassembly

This section provides the details for the disassembly of the Coupling Assembly.

**WARNING: ALL PROCEDURES DESCRIBED IN THIS MANUAL SHALL BE PERFORMED IN AN AREA FREE OF DUST, LINT, FINE METAL FILINGS, OIL, GREASE, FLAMMABLE SOLVENTS OR OTHER COMBUSTIBLE MATERIALS. THESE MATERIALS MAY IGNITE IN THE PRESENCE OF OXYGEN AND CAUSE AN EXPLOSION OR FIRE RESULTING IN SERIOUS PERSONAL INJURY OR DEATH.**

**WARNING: FAILURE TO USE SUITABLE EYE PROTECTION DURING CLEANING PROCEDURES MAY CAUSE INJURY TO THE EYES.**

#### A. Coupling Disassembly

**CAUTION: REMOVAL OF THE NUTS (-30, -40, IPL FIG. 1) THAT ATTACH TO THE COUPLING ASSEMBLY IS NOT RECOMMENDED. THE NUTS ATTACH TO THE COUPLING ASSEMBLY WITH WIRE (-50, -60) THAT CANNOT BE REMOVED AFTER ASSEMBLY WITHOUT DAMAGING THE COUPLING ASSEMBLY.**

- (1) If applicable, turn nut (-40) counterclockwise and remove the plug of the plug and chain assembly (100) from coupling subassembly (20A).

**CAUTION: RING ON PLUG AND CHAIN ASSEMBLY (100) IS ATTACHED BEFORE NUT (-40) IS ATTACHED TO COUPLING SUBASSEMBLY USING WIRE (-60) AND CANNOT BE REMOVED WITHOUT DAMAGING THE COUPLING ASSEMBLY.**

**4. General Disassembly (Continued)****A. Coupling Disassembly (Continued)**

(2) If applicable, turn nut (-40) counterclockwise and remove plug (80, 90) from coupling subassembly (20A).

**CAUTION:** WHEN REMOVING TRANSDUCER FROM COUPLING ASSEMBLY, DO NOT USE TRANSDUCER BODY AS A LEVER OR THE TRANSDUCER MAY BE DAMAGED. USE A WRENCH ON THE FLATS OF THE SQUARE BOSS ABOVE THE THREADS ON THE TRANSDUCER AND ON THE HEX NUT ON THE COUPLING ASSEMBLY.

(3) If applicable, turn nut (-30, -40) counterclockwise and remove transducer (70, 70A) from coupling subassembly (10A, 20A).

**B. Transducer Disassembly**

For disassembly of Sparton Transducer P/N 10003108 (70, IPL Fig. 1), refer to the CMM listed in Required Documents in this section of the manual.

There are no disassembly procedures for transducer P/N 10008792 (70A, IPL Fig. 1). If transducer is defective or malfunctions, the replacement of transducer is necessary.

## CLEANING

### 1. General

This section describes the materials and the procedures necessary for cleaning the 801321 Series Thermal Compensator Coupling Assembly (Coupling Assembly). Before cleaning the Coupling Assembly, the applicable steps in the DISASSEMBLY section of this manual must be completed. Refer to the ILLUSTRATED PARTS LIST section of this manual for item numbers.

### 2. Special Tools and Equipment

There are no special tools or equipment required for cleaning of the Coupling Assembly.

### 3. Cleaning Materials

A list of cleaning materials is shown in Table 401. United States and international environmental agreements may limit the use of some cleaning materials. Equivalent cleaning materials may be substituted.

Cleaning Materials  
Table 401

MATERIAL	DESCRIPTION	MANUFACTURER (W/ VENDOR CODE)
Cleaner	Nonionic detergent, Type I (MIL-D-16791)	Commercially Available
Degreasing Agent	Genesolv 2000 or 1, 1-Dichloro-1-fluoroethane	Allied Signal Corp. Morristown, NJ (V72658)

### 4. Required Documents

For Cleaning of Sparton transducers P/N 10003108 (70, IPL Fig.1), refer to COMPONENT MAINTENANCE MANUAL (CMM) 35-11-2 from Sparton Technology, Inc., Rio Rancho, NM (V20768). This CMM is not available from Scott Aviation.

### 5. Cleaning

**WARNING: FAILURE TO USE SUITABLE EYE PROTECTION DURING CLEANING PROCEDURES MAY CAUSE INJURY TO THE EYES.**

**WARNING: BEFORE USING CLEANING SOLVENTS, REFER TO THE APPLICABLE MATERIAL SAFETY DATA SHEET (MSDS) FOR MORE PRECAUTIONARY DATA, APPROVED SAFETY EQUIPMENT AND EMERGENCY MEDICAL AID OR PERSONAL INJURY MAY RESULT.**

**WARNING: WHEN USING CLEANING SOLVENTS, AVOID PROLONGED OR REPEATED CONTACT WITH SKIN AND INHALATION OF TOXIC VAPORS OR PERSONAL INJURY MAY RESULT.**

## 5. Cleaning (Continued)

**WARNING:** MAKE SURE THAT CLEANING PROCEDURES ARE PERFORMED IN AN APPROVED CLEANING CABINET, OR IN A WELL VENTILATED ROOM OR AREA, OR PERSONAL INJURY MAY OCCUR.

**WARNING:** DO NOT USE SOLVENTS NEAR OPEN FLAMES, OR IN AREAS WHERE THERE ARE HIGH TEMPERATURES, OR PERSONAL INJURY, FIRE OR EXPLOSION MAY OCCUR.

**WARNING:** DO NOT ALLOW DIRT, DUST, PETROLEUM PRODUCTS, OR OTHER CONTAMINANTS IN THE UNIT OR ON TOOLS THAT CONTACT THE UNIT BECAUSE THESE MATERIALS MAY CAUSE FIRE, EXPLOSION, AND/OR PERSONAL INJURY WHEN EXPOSED TO OXYGEN.

Clean coupling assembly (-1 thru -1T) except transducer (70, 70A) using a vapor degreasing method with degreasing agent (refer to Table 401). Dry components with clean, dry, oil-free, heated air. Hydrocarbon contamination must not be greater than 1.0 mg per square foot of oxygen exposed surface. For transducer cleaning, see 6. Transducer Assembly below.

**NOTE:** For an understanding of the requirement for 1.0 mg per square foot of oxygen exposed surface refer to optional document Federal Specification RR-C-901 available from the Defense Support Agency.

**CAUTION:** DO NOT SUBMERGE OR VAPOR DEGREASE TRANSDUCER ASSEMBLY (70, 70A), AS THIS WILL DAMAGE THE ELECTRICAL COMPONENTS WITHIN THE UNIT.

**NOTE:** If the thermal compensator brush that is inside the coupling subassembly (10A, 20A) has large amounts of particulate contamination, replace the coupling subassembly.

## 6. Transducer Assemblies

Flush ports and passages of the transducer assembly that come into contact with oxygen using a suitable solvent. Dry the transducer with clean, dry, oil-free air; wipe the exterior of the transducer assembly using a clean, lint-free cloth. Hydrocarbon contamination shall not exceed 1.0 mg per square foot of oxygen exposed surface.

**NOTE:** For an understanding of the requirement for 1.0 mg per square foot of oxygen exposed surface refer to optional document Federal Specification RR-C-901 available from the Defense Support Agency.

For cleaning of Sparten transducer (70), refer to the CMM listed in Required Documents in this section of the manual.

CHECK**1. General**

This section describes the check procedures for the 801321 Series Thermal Compensator Coupling Assembly (Coupling Assembly). After disassembly and cleaning of any part, the part must be visually checked before it can be used during assembly. If a part is damaged, defective, deteriorated, or is not serviceable, replace the part.

Refer to the ILLUSTRATED PARTS LIST section of this manual for the item numbers given in parentheses.

**2. Required Documents**

For a check of Sparton transducers P/N 10003108 (70, IPL Fig.1), refer to COMPONENT MAINTENANCE MANUAL (CMM) 35-11-2 from Sparton Technology, Inc., Rio Rancho, NM (V20768). This CMM is not available from Scott Aviation.

**3. Checks****A. Coupling Assemblies**

Perform the following checks of the coupling assembly (-1 thru -1T).

- (1) Check the coupling assemblies for cracks, nicks, burrs, damaged threads, or obvious damage.
- (2) Check the metal sealing surfaces for scratches, nicks, or distortion.
- (3) Visually check the thermal compensator brush, inside the coupling assembly, for particulate contamination.

**B. Transducer Assemblies**

For a check of the Sparton Transducer P/N 10003108 (70, IPL Fig. 1), refer to the CMM listed in Required Documents in this section of the manual.

Check transducers P/N 10008792 (70A, IPL Fig.1) and P/N 10003108 (70, IPL Fig. 1, manufactured by Bourns Inc.) as follows.

- (1) Check the transducer assemblies for cracks, nicks, burrs, damaged threads, or obvious damage.
- (2) Check the metal sealing surfaces for scratches, nicks, or distortion.
- (3) Check the electrical connector for bent, loose, corroded or broken pins.
- (4) Check the pressure port for contaminants.

In addition, check transducers P/N 10003108 (70, IPL Fig. 1) manufactured by Bourns Inc. for the following.

- (5) Check for adhesive/sealant between the square boss and the case of transducers, P/N 10003108 (70, IPL Fig.1).

REPAIR**1. General**

This section describes the repair procedures for the 801321 Series Thermal Compensator Coupling Assembly. Prior to repair, components must be checked (refer to CHECK, in this manual).

**2. Special Tools and Equipment**

There are no special tools and equipment that are needed for this section of the manual.

**3. Repair Materials (P/N 10003108, IPL 70, Fig. 1, Manufactured by Bourns)**

Silicone rubber adhesive-sealant, RTV 102, manufactured by GE Silicones, 260 Hudson River Rd., Waterford, NY 12188 (Vendor code 0D426) (commercially available) is required for Transducer Repair. An equivalent material may be substituted.

**4. General Repair**

Repair shall be limited to only those activities below.

- A. Cleaning
- B. Burr removal
- C. Thread chasing
- D. Replacement of cracked, bent, broken, scored, or otherwise defective components.

**5. Transducer Repair (P/N 10003108, IPL 70, Fig. 1, manufactured by Bourns)**

The following list of Scott part numbers for the 801321 Series Thermal Compensator Coupling Assembly may have a transducer Scott part number 10003108 that was manufactured by Bourns Inc. before Sept. 1977. This transducer requires the addition of silicone rubber adhesive-sealant to the gap between the square boss at the bottom of the assembly and the case per Scott Service Bulletin 35-34.

NOTE: The transducers (P/N 10003108, IPL 70, Fig. 1) that are manufactured by Sparton Southwest, Inc. do not need this repair.

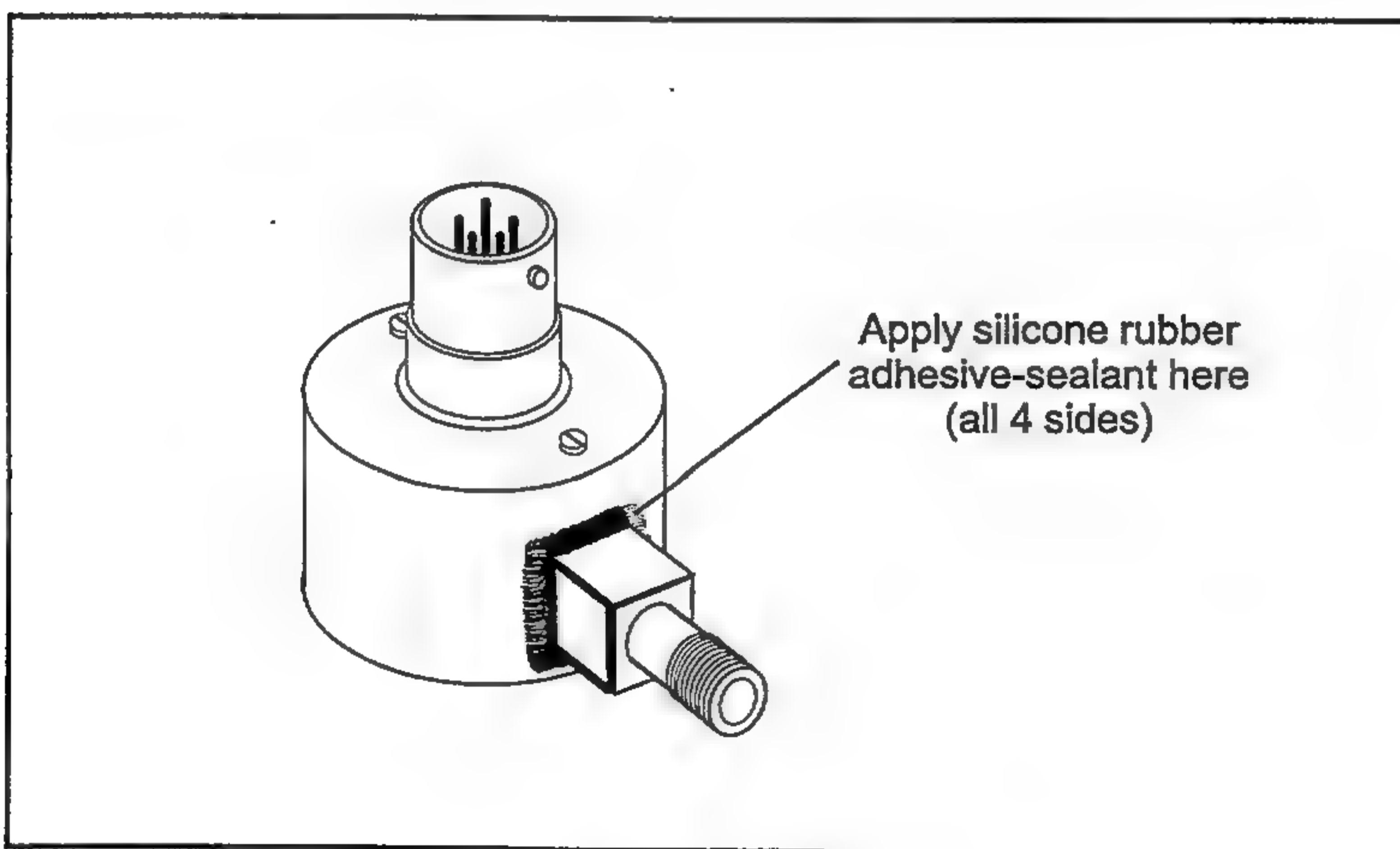
<u>Part Number</u>	<u>Serial Number</u>	<u>Manufacture Date</u>
801321-01	All Serial Numbers	before Sept. 1977
801321-02	All Serial Numbers	before Sept. 1977
801321-03	All Serial Numbers	before Sept. 1977
801321-04	All Serial Numbers	before Sept. 1977
801321-05	All Serial Numbers	before Sept. 1977
801321-06	All Serial Numbers	before Sept. 1977
801321-08	All Serial Numbers	before Sept. 1977

## 5. Transducer Repair (Continued)

**WARNING: ALLOWING DIRT, DUST, PETROLEUM PRODUCTS, OR OTHER CONTAMINANTS INTO THE UNIT OR ONTO TOOLS THAT CONTACT THE UNIT MAY CAUSE FIRE, EXPLOSION, AND/OR PERSONAL INJURY WHEN EXPOSED TO OXYGEN.**

Perform the following modification on Bourns transducer P/N 10003108 manufactured before September 1977 (70, IPL Fig. 1) using RTV 102, silicone rubber adhesive-sealant.

- A. Make sure that the transducer is clean and dry using a lint-free cloth and a mild detergent (refer to CLEANING in this manual).
- B. Using the special tip provided with the silicone rubber adhesive-sealant, apply approximately 0.125 in (0.32 cm) fillet between the square boss and the case of the transducer on all 4 sides of the square boss. Refer to Figure 601 for an illustration of the silicone rubber adhesive-sealant on the transducer.
- C. Make the silicone rubber adhesive-sealant smooth and even after application and before it dries.
- D. Permit the silicone rubber adhesive-sealant to dry (45 minutes drying time, overnight for complete curing) and then trim off any excess silicone rubber adhesive-sealant.



Transducer Repair  
Figure 601

## ASSEMBLY

### 1. General

This section describes the equipment and procedures necessary for assembly of the 801321 Series Thermal Compensator Coupling Assembly (Coupling Assembly). Before assembly of the Coupling Assembly, the CHECK and CLEANING sections of this manual must be completed. Refer to the ILLUSTRATED PARTS LIST section for item numbers given in parentheses.

This section also describes the parts and procedures necessary for the conversion of the 801321-0X Series Thermal Compensator Coupling Assembly with the transducer P/N 10003108 (70, IPL Fig. 1) to the 801321-1X Series Thermal Compensator Coupling Assembly with the transducer P/N 10008792 (manufactured by Druck Inc.). Conversion of the Coupling Assembly is not a required procedure of ASSEMBLY. Refer to 6. Coupling Assembly Conversion in this section.

### 2. Special Tools and Equipment

No special tools or equipment are required for assembly of the Coupling Assembly.

### 3. Required Documents

For assembly of Sparton transducers, P/N 10003108 (70, IPL Fig.1), refer to COMPONENT MAINTENANCE MANUAL (CMM) 35-11-2 from Sparton Technology, Inc., 4901 Rockaway Blvd., SE, Rio Rancho, NM 87124-4469 (Vendor Code 20768). This CMM is not available from Scott Aviation.

### 4. Consumable Materials

No consumable materials are required for assembly of the Coupling Assembly. However, consumable materials for the Coupling Assembly conversion procedure are shown in Table 701. Equivalent materials may be substituted.

Table 701  
Consumable Assembly Materials  
(Coupling Conversion Only)

MATERIAL	PART NUMBER	MANUFACTURER
Ink Remover	Ink Remover or Denatured Alcohol	Commercially Available
Extra-fine-point Permanent-ink Marking Pen	SHARPIE® (or equivalent)	Commercially Available

SHARPIE is a registered trademark of the Sanford Corp., Bellwood, IL, USA.

### 5. General Assembly

**WARNING:** **ALLOWING DIRT, DUST, PETROLEUM PRODUCTS, OR OTHER CONTAMINANTS INTO THE UNIT OR ONTO THE TOOLS THAT CONTACT THE UNIT MAY CAUSE FIRE, EXPLOSION, AND/OR PERSONAL INJURY WHEN EXPOSED TO OXYGEN.**

## 5. General Assembly (Continued)

**WARNING:** ALL PROCEDURES DESCRIBED IN THIS MANUAL SHALL BE PERFORMED IN AN AREA FREE OF DUST, LINT, FINE METAL FILINGS, OIL, GREASE, FLAMMABLE SOLVENTS OR OTHER COMBUSTIBLE MATERIALS. THESE MATERIALS MAY IGNITE IN THE PRESENCE OF OXYGEN AND CAUSE AN EXPLOSION OR FIRE RESULTING IN SERIOUS PERSONAL INJURY OR DEATH.

**WARNING:** FAILURE TO USE SUITABLE EYE PROTECTION MAY CAUSE ACCIDENTAL EYE INJURY.

All components used in assembly of the Coupling Assembly shall have been cleaned and checked in accordance with the preceding sections of this manual.

Perform the following procedures for assembly of the Coupling Assembly (Refer to IPL Figure 1 for item numbers).

### A. Transducer Assembly

- (1) For assembly of Sparton Transducers (70), refer to the CMM listed in Required Documents in this section of the manual.
- (2) There are no assembly procedures for transducer P/N 10008792 (70A, IPL Fig. 1).

### B. Coupling Assembly

Refer to IPL Figure 1 and perform the following procedure.

**CAUTION:** WHEN ATTACHING TRANSDUCER ASSEMBLY (70, 70A, IPL Fig. 1) TO COUPLING ASSEMBLY (-1 THRU -1T EXCLUDING -1, -1G, -1K WHICH HAVE NO TRANSDUCERS), USE A WRENCH ON THE FLATS OF THE TRANSDUCER SHAFT. DAMAGE WILL OCCUR TO THE TRANSDUCER IF THE BODY IS USED AS A LEVER.

**NOTE:** Coupling Assemblies 801321-00, -07 and -10 (-1, -1G, -1K, IPL Fig. 1) do not have transducers.

**NOTE:** The following step applies only to 801321-01 thru -06, -08 and -09 Coupling Assemblies (-1A thru -1F, -1H, -1J, IPL Fig. 1).

- (1) Attach transducer (70) to coupling subassembly (10A, 20A). Torque nut (-30, -40) that attaches to transducer to 170 - 200 in•lbs (19.2 - 22.6 N•m) with the orientation of transducer as shown in IPL Figure 1.

**NOTE:** The following step applies only to Coupling Assemblies 801321-11 thru -19 (-1L thru -1T, IPL Fig. 1).

- (2) Attach transducer (70A) to coupling subassembly (10A, 20A). Torque nut (-30, -40) that attaches to transducer to 170 - 200 in•lbs (19.2 - 22.6 N•m) with the orientation of transducer as shown in IPL Figure 1.

## 5. General Assembly (Continued)

### B. Coupling Assembly (Continued)

**NOTE:** The following step only applies to the 801321-09, -10 and -19 Coupling Assemblies (-1J, -1K, -1T).

(3) Attach plug(s) (80) to the coupling subassembly (20A). Tighten the nut(s) (-40) that attaches to the plug(s) to 170 - 200 in•lbs (19.2 - 22.6 N•m).

**NOTE:** The following step only applies to the 801321-08 and -18 Coupling Assemblies (-1H, -1S, IPL Fig. 1).

(4) Attach the plug of the plug and chain assembly (100) to the coupling subassembly (20A). Tighten the nut (-40) that attaches to the plug of the plug and chain assembly to 170 - 200 in•lbs (19.2 - 22.6 N•m).

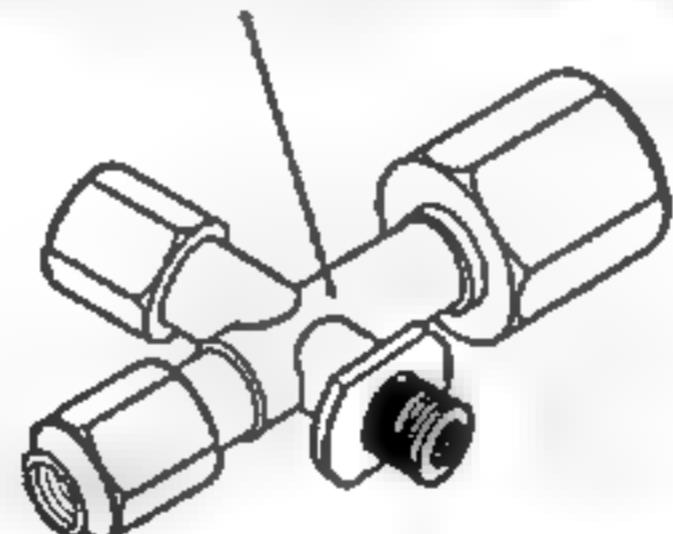
**NOTE:** The 801321-00 and the 801321-07 Coupling Assemblies do not require assembly (-1, -1G).

## 6. Coupling Assembly Conversion

The Coupling Assembly P/N 801321-01 thru -06, -08 and -09 (-1A thru -1F, -1H, -1J, IPL Fig. 1) with the Sparton transducer P/N 1003108 (70, IPL Fig. 1) may be converted to a Coupling Assembly 801321-11 thru -19 (-1L thru -1T, IPL Fig. 1) with the Druck transducer P/N 10008792 (70A, IPL Fig. 1) per SIL-35-06. To convert the Coupling Assembly, use the following procedure.

- A. If applicable, turn the nut (-30, -40) counterclockwise and remove the transducer (70) from the Coupling Assembly (-1A thru -1F, -1H, -1J).
- B. Refer to Figure 701 and find the ink-stamped part number on the Coupling Assembly P/N 801321-01 thru -06, -08 and -09 (-A thru -1F, -1H, -1J, IPL Fig. 1).

### APPROXIMATE LOCATION OF PART NUMBER AND SERIAL NUMBER



TYPICAL COUPLING ASSEMBLY

Part Number and Serial Number Locations  
Figure 701

- C. Record the part number on a separate piece of paper for reference during marking of the new part number.

## 6. Coupling Assembly Conversion (Continued)

- D. Remove the last two numbers of the part number (the two numbers after the dash) using ink-remover or denatured alcohol.
- E. Using an extra-fine-point permanent-ink marking pen, write the new number after the dash in the part number. Refer to Table 702 for the new dash number in the coupling assembly part number. Refer to Figure 701 for the location of the part number.

**Table 702**  
**Conversion Part Number**

ORIGINAL PART NUMBER	NUMBER REMOVED	NUMBER ADDED	NEW PART NUMBER
801321-01	01	11	801321-11
801321-02	02	12	801321-12
801321-03	03	13	801321-13
801321-04	04	14	801321-14
801321-05	05	15	801321-15
801321-06	06	16	801321-16
801321-08	08	18	801321-18
801321-09	09	19	801321-19

- F. Using an extra-fine-point permanent-ink marking pen, write the letter "C" after the Coupling Assembly serial number to indicate that the conversion has been performed. Refer to Figure 701 for the location of the serial number.

**CAUTION:** WHEN ATTACHING TRANSDUCER ASSEMBLIES (70A) TO COUPLING ASSEMBLIES P/N 801321-11 THRU -19 (-1L THRU -1T, IPL Fig. 1), USE A WRENCH ON THE FLATS OF THE TRANSDUCER SHAFT. DAMAGE WILL OCCUR TO THE TRANSDUCER IF THE BODY IS USED AS A LEVER.

- G. Attach the transducer P/N 10008792 (70A, IPL Fig. 1) to the Coupling Assembly P/N 801321-11 thru -19 (-1L thru -1T). Torque the nut (-30, -40) that attaches to the transducer to 170 - 200 in•lbs (19.2 - 22.6 N•m) with the orientation of the transducer as shown in IPL Figure 1.

## 7. Storage

- A. Attach and tighten an appropriate protective cap on any open connection of Coupling Assembly to prevent contamination or place Coupling Assembly in a polyethylene bag and seal the bag.
- B. Store in a cool area, away from sources of high heat and humidity.

FITS AND CLEARANCES

A list of torque values critical to the assembly and operation of the 801321 Series Thermal Compensator Coupling Assembly is shown in Table 801.

Table 801  
Torque Values

Item No. (IPL Fig. 1)	Nomenclature	Torque Values	
		U.S. (in•lbs)	Metric (N•m)
-30, -40	Nut	170 - 200	19.2 - 22.6

## SPECIAL TOOLS, FIXTURES AND TEST EQUIPMENT

Special tools, fixtures and test equipment required for this Component Maintenance Manual (CMM) are given in Table 901. All other tools and/or equipment used in this manual are standard oxygen shop tools and/or equipment. Equivalent tools, fixtures and test equipment may be substituted for the listed items.

**WARNING:** DO NOT ALLOW DUST, DIRT, PETROLEUM PRODUCTS OR OTHER CONTAMINANTS ON TOOLS OR TEST EQUIPMENT THAT CONTACT THE UNIT OR FIRE, EXPLOSION AND/OR PERSONAL INJURY OR DEATH CAN RESULT WHEN THE UNIT IS EXPOSED TO OXYGEN.

Table 901  
Special Tools and Test Equipment

QTY	PART NAME	NUMBER	MANUFACTURER
1	Digital Multimeter (VM) (0-10 VDC)	10 Series	Fluke Corp 6920 Seaway Blvd. P. O. Box 9090 Everett WA 98206-9090 (V89536)
1	Power Supply (28 $\pm$ 2 VDC)	LNS-Z-28	Lambda Electronics 515 Broad Hollow Rd. Melville, NY 11747-3700 (V9T790)
1	Pressure Gauge (0-2000 psi)	1403 Series Oxygen Cleaned	Ametek (U.S. Gauge) 900 Clymer Ave. Sellersville, PA 18960-2625 (V61349)
1	Regulator, Test	PR55-1A51H9L151	Vemco Corp. (Go, Inc.) 305 S. Acacia St. San Dimas, CA 91773-2925 (V62527)
1 or 2 AR	Test Plug (As Required) (Mates with internal thread of coupling assembly)	MS21913J5 (SPN 333502-305)	Commercially available
1 AR	Test Cap (2 pieces) (As Required) (Mates with external thread of coupling assembly)	MS21914-6J Seal cap w/ MS21921-6J Nut (Requires both parts)	Commercially available

## ILLUSTRATED PARTS LIST

### 1. Introduction

This Illustrated Parts List section shows the illustrations and the authorized replacement parts for the 801321 Series Thermal Compensator Coupling Assembly (Coupling Assembly).

#### A. How to use this section of the Component Maintenance Manual (CMM):

- (1) If you do not know the part number you need:
  - (a) Find the part in the applicable figure.
  - (b) Note the number used for the part.
  - (c) Refer to the number in the FIG. ITEM column and find the part number for the Scott authorized replacement part in the PART NUMBER column.
- (2) If you know the part number, refer to the appropriate figure that shows the part; and make sure that the part in the illustration is the same part that you need.

#### B. Description of the Illustrated Parts List Entries

This section describes the information found in the Illustrated Parts List (IPL).

##### (1) FIG. ITEM

###### (a) Items not Illustrated

Items that are not shown in the figure have a dash in front of the item number.

###### (b) Alpha Variant Item Numbers

Alpha variants that have letters A thru Z (except I and O) that are added after the item number show configuration differences in items, optional parts, parts that have been improved, or added items.

##### (2) PART NUMBER

The numbers in this column are the part numbers that Scott gives to an item, the original part number for an item that is from a vendor, or a common specification number (e.g., MIL specification number) that is used for reference of an item. If a part number that Scott gives an item is different than the vendor part number or a common specification number, the vendor number or the common specification number is shown in the PART NUMBER column and the Scott part number (SPN XXXXX) is shown in the NOMENCLATURE column.

##### (3) AIRLINE STOCK NUMBER

This column has space available for a number, up to eleven characters in length, to be written by the airline.

**1. Introduction (Continued)****B. Description of the Illustrated Parts List Entries (Continued)****(4) NOMENCLATURE**

The abbreviations in this column are shown in the List of Abbreviations in the INTRODUCTION section of this CMM

The definitions of some abbreviations that are found in this column are:

NP	This is a part that is not available by itself. NP is shown in the two last spaces of the Nomenclature column.
OPT	The part is equivalent to the primary part and can be interchanged with the primary part.

This column has the description of the part and uses the following level of indenture to show the relationship of one part to another.

**123 (Assembly Number)**

- Subassembly Top Number
- Attaching Parts for the Subassembly Top Number or Assembly Item \*\*\*
- Assembly Item
  - Sub-Subassembly Top Number
  - Attaching Parts for the Sub-Subassembly Top # or Subassembly Item \*\*\*
  - Subassembly Item

NOTE: The three asterisks are used to separate the attaching parts of one item from the following item.

**(5) EFF. CODE**

When the IPL includes more than one top assembly, each different top assembly is identified with an alpha code (A, B, C, etc.). If a part or subassembly is identified with an alpha code, that part can only be used in the top assembly with the same EFF. CODE.

Any part or subassembly with no EFF. CODE may be used in any top assembly.

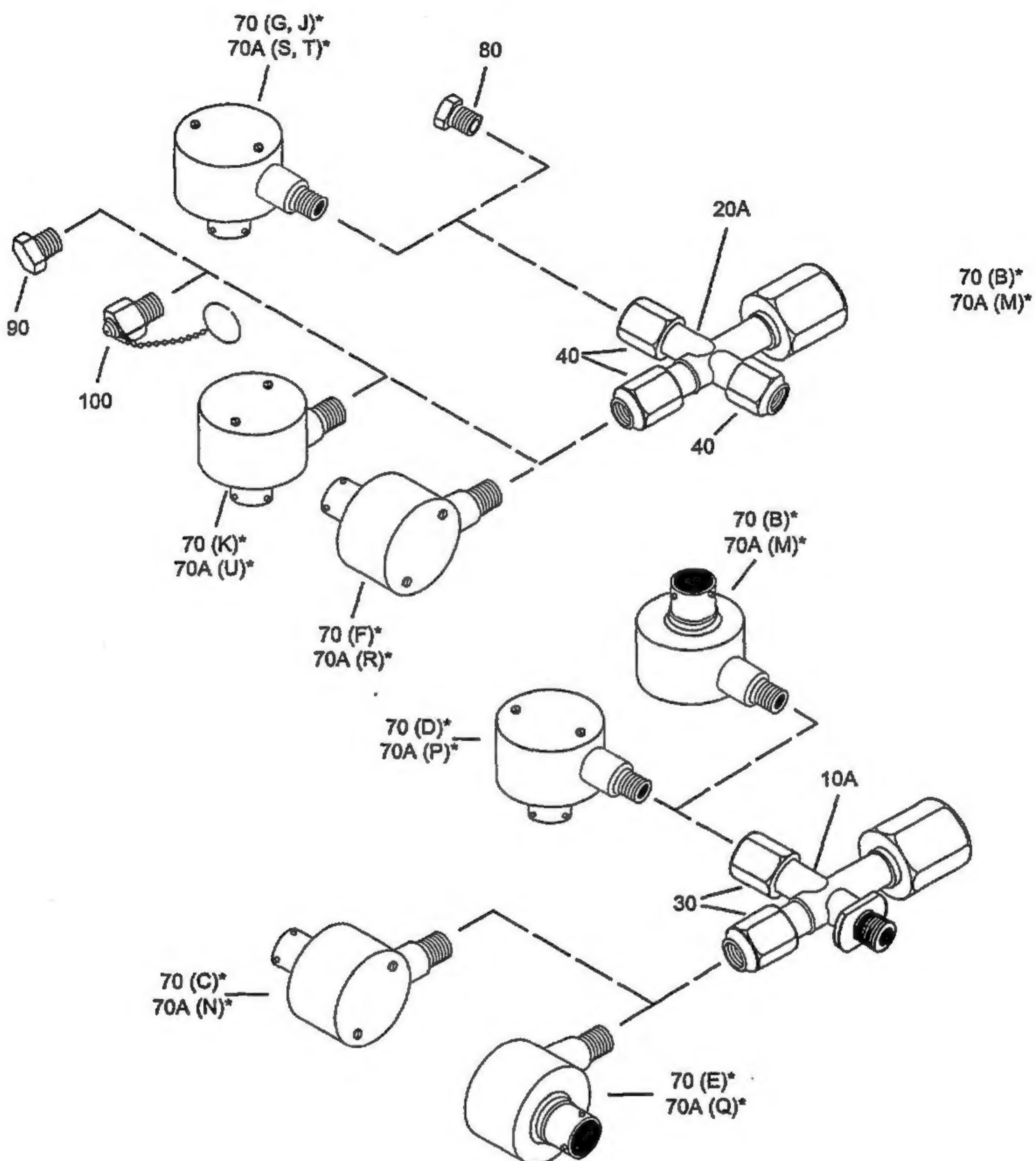
**(6) UNITS PER ASSEMBLY**

This column shows the number of parts that are used in the assembly.

**1. Introduction (Continued)****C. Vendor Codes**

Vendor Codes in this section are shown in the NOMENCLATURE column of the IPL and have a "V" before the 5-digit alphanumeric number (e.g., VFO553). The following is a list of the vendors that supply items in this section:

<u>CODE</u>	<u>NAME AND ADDRESS</u>
20768	Sparton Technology Inc. 4901 Rockaway Blvd., SE Rio Rancho, NM 87124-4469 U.S.A.
1CE49	Druck Inc. 4 Dunham Dr. New Fairfield, CT 06812 U.S.A.



\* EFFECTIVITY CODES SHOW LOCATION AND ORIENTATION

Thermal Compensator Coupling Assembly  
Figure 1

FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	NOMENCLATURE 1234567	EFF. CODE	UNITS PER ASSY
1-1	801321-00		COUPLING ASSEMBLY	A	RF
-1A	801321-01		COUPLING ASSEMBLY	B	RF
-1B	801321-02		COUPLING ASSEMBLY	C	RF
-1C	801321-03		COUPLING ASSEMBLY	D	RF
-1D	801321-04		COUPLING ASSEMBLY	E	RF
-1E	801321-05		COUPLING ASSEMBLY	F	RF
-1F	801321-06		COUPLING ASSEMBLY	G	RF
-1G	801321-07		COUPLING ASSEMBLY	H	RF
-1H	801321-08		COUPLING ASSEMBLY	J	RF
-1J	801321-09		COUPLING ASSEMBLY	K	RF
-1K	801321-10		COUPLING ASSEMBLY	L	RF
-1L	801321-11		COUPLING ASSEMBLY	M	RF
-1M	801321-12		COUPLING ASSEMBLY	N	RF
-1N	801321-13		COUPLING ASSEMBLY	P	RF
-1P	801321-14		COUPLING ASSEMBLY	Q	RF
-1Q	801321-15		COUPLING ASSEMBLY	R	RF
-1R	801321-16		COUPLING ASSEMBLY	S	RF
-1S	801321-18		COUPLING ASSEMBLY	T	RF
-1T	801321-19		COUPLING ASSEMBLY	U	RF
-10	801335-00		• COUPLING SUBASSEMBLY (REPLD BY ITEM 10A)	NP	A-E, M-Q      1
10A	801321-00		• COUPLING SUBASSEMBLY (REPLS ITEMS -10, -30 AND -50)		B-E M-Q      1
-20	801599-00		• COUPLING SUBASSEMBLY (REPLD BY ITEM 20A)	NP	F-L, R-U      1
20A	801321-07		• COUPLING SUBASSEMBLY (REPLS ITEMS -20, -40 AND -60)		F, G, J-L
30	MS27073-5CL		• NUT (SPN 10003182) (REPLD BY 10A)	NP	A-E, M-Q      2
40	MS27073-5CL		• NUT (SPN 10003182) (REPLD BY ITEM 20A)	NP	F-L, R-U      3

- ITEM NOT ILLUSTRATED



CMM WITH IPL  
801321 SERIES  
THERMAL COMPENSATOR COUPLING ASSEMBLY

FIG. ITEM	PART NUMBER	AIRLINE STOCK NO.	NOMENCLATURE 1234567	EFF. CODE	UNITS PER ASSY
1-			ATTACHING PARTS		
-50	MS27074-5C		• WIRE (SPN 59784-00) (REPLD BY ITEM 10A)	NP	A-E, M-Q
-60	MS27074-5C		• WIRE (SPN 59784-00) (REPLD BY ITEM 20A)	NP	F-L, R-U
		***			
70	10003108		• TRANSDUCER VENDOR (V32997 BOURNS INC) REPLD BY VENDOR (V20768 SPARTON TECHNOLOGY) 9/77	B-G J, K	1
70A	10008792		• TRANSDUCER (V1CE49)	M-U	1
80	MS21913J5		• PLUG (SPN 33502-305)	K, L, U	1
90	MS21913J5		• PLUG (SPN 33502-305)	L	1
100	801691-00		• PLUG WITH CHAIN	J, T	1

- ITEM NOT ILLUSTRATED

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